

REMARKS

I. Status of Claims

Claims 1-20 were pending of which claim 20 was withdrawn.

Claims 1-5, 8-11 and 13-15 were rejected under 35 USC 103(a) over Fox (US 5,327,045).

Claim 12 was rejected under 35 USC 103(a) over Fox (US 5,327,045) in view of Neiger (US 4,937,496).

Claims 1-7, 9-13 and 15 were rejected under 35 USC 103(a) over de Bie (US 4,117,367).

Claims 16-19 were rejected under 35 USC 103(a) over Eggers (US 6,437,509) in view of Makoto (JP 11-123577).

Claim 1 is amended to include the feature that the volume of the space provided by the at least one hole is between 0.02 mm^2 and 2 mm^2 and is supported by the text at page 3, lines 1-2. Because Applicants believe that the Office Action to which this paper responds was improperly made Final (see below) Applicants respectfully request that the amendment of claim 1 be entered.

Claim 16 has been amended to bring the subject matter into conformity with the subject matter of claim 1.

Claims 1-20 are pending of which claim 20 is withdrawn.

II. Finality of the Office Action dated 03/08/2010

The Office Action dated 03/08/2010 was issued as a Final Office Action and was in response to the Applicants previous submission, dated February 8, 2010, which itself was in response to the Final Office Action dated December 15, 2009. With the exception of a small clarifying amendment to claim 14 in response to a 35 USC 112 rejection, no amendments were made to the claims in response to the December 15, 2009, Final Office Action in our reply of February 8, 2010. In the Office Action dated March 8, 2010, new art (Fox) was cited, to which Applicants have not had opportunity to respond, and which was not necessitated by amendments made by Applicants. Accordingly, Applicants believe the current Office Action should have been issued as a non-Final Office Action

and not a Final Office Action, and request that the Finality of the Office Action be withdrawn.

III. Rejections under 35 USC 103(a)

Claims 1-5, 8-11 and 13-15 were rejected under 35 USC 103(a) over Fox (US 5,327,045).

In making the rejection against claims 1 and 3 the Office Action presents the reasoning that Fox discloses an electrode for discharge lamps comprising a continuous pin which itself comprises a shaft as shown in Fig. 1 and a head part, described as item 70 in Fig. 5, and wherein at least one hole is arranged in the head part of the pin.

Applicants disagree that this is a correct interpretation of Fox for the following reasons.

Applicants have examined Fox and it is their considered opinion that Fox discloses three electrode embodiments, one of which one, shown in Figs. 1 and 2, has a shaft and a head which comprises a strip folded into recesses, col. 2, lines 22-30, and the other two of which, shown in Figs. 3, 4 and 5, comprise a rectangular block, col. 3, lines 26-28 and lines 47-51, intended for arrangement within a pair of flat panels, col. 3, lines 36-46, and col. 4, lines 12-17. The shaft as shown in Figs. 1 or 2 and the head part as shown in Fig. 5 are from different embodiments of Fox and are not disclosed in combination.

Therefore it is Applicants considered opinion that contrary to the arguments put forward in the Office Action, Fox does not show the combination of the electrode of Fig. 1 or 2 for metal vapor-containing discharge lamps, made from a high-melting, electrically conductive material comprising a continuous pin which defines a longitudinal axis L and which also comprises a shaft part and a head part, item 70 of Fig. 5, with a diameter D2 which extends beyond that of the shaft part. For this reason alone Applicants believe that claims 1 and 3 are patentable over Fox.

However, in addition to this claim 1 recites that at least one hole is arranged in the continuous pin, the hole arranged at an angle of 60 to 90 degrees with respect to the longitudinal axis. It is Applicants' opinion that the embodiment of Figs. 1 and 2 of Fox does not disclose holes, disclosing instead 'recesses', described in col. 2, lines 26-30,

arranged between deep ripples in the structure of the electrode. Further, Applicants believe that the embodiment of Fig. 3 also does not comprise holes, but comprises instead 'slots', col. 3, lines 29-31, arranged across the depth of a rectangular block, col. 3, lines 26-35. The embodiment of Fig. 5, meanwhile, discloses a rectangular block comprising holes, col. 3, line 47, to col. 4, line 3, and therefore also does not disclose holes arranged in a continuous pin.

For these reasons also, Applicants believe that claim 1 is patentable over Fox.

Nevertheless, claim 1 now includes the feature that the volume of the space provided by the at least one hole is between 0.02 mm^3 and 2 mm^3 .

After careful examination of the volume of the space enclosed in the holes of the embodiment described in Fig. 5 of Fox and in the text at col. 3, line 47, to col. 4, line 11, Applicants calculate that the volume of the space provided by the at least hole is at least 5.73 mm^3 .

Therefore for this reason also Applicants believe claim 1 is patentable over Fox.

Claims 2-5, 8-11 and 13-15 are dependent, either directly or indirectly, upon claim 1 and are therefore also believed by Applicants to be patentable over Fox for at least the same reasons.

However, with regard to the rejection of claim 10 Applicants note that the rejection is based on an interpretation that Fig. 5 of Fox discloses a plurality of holes that are connected to one another. Applicants believe that this is not so and believe that Fig. 5 shows quite clearly that the holes 72 are formed distinct and separate from each other.

Claim 12 was rejected under 35 USC 103(a) over Fox (US 5,327,045) in view of Neiger (US 4,937,496).

Claim 12 is dependent on claim 1, believed by Applicants to be patentable over Fox for the reasons already provided. Neiger does not cure this deficiency. Applicants therefore believe claim 12 is patentable in view of the combination of Fox and Neiger.

Claims 1-7, 9-13 and 15 were rejected under 35 USC 103(a) over de Bie (US 4,117,367).

In making the rejection under de Bie the Office Action argued that de Bie discloses the features of claim 1. Claim 1 now includes the feature that the volume of the space provided by the at least one hole is between 0.02 mm^2 and 2 mm^2 and Applicants believe this is not disclosed in de Bie. De Bie discloses a tungsten anode which comprises four recesses and while no specific information is given regarding the volume of space contained in these recesses it is noted, col. 4, lines 37-40, describing Fig. 2, that the anode is disclosed with a length of 2.6 cm and which comprises a recess of about half this length. Applicants' professional assessment is that the volume of the space provided by the at least one hole cannot be as low as the range of 0.02 mm^2 to 2 mm^2 , and therefore Applicants believe that de Bie cannot disclose the features of claim 1.

Applicants therefore believe claim 1 is patentable over de Bie.

Claims 2-7, 9-13 and 15 are dependent, either directly or indirectly, upon claim 1 and are therefore also believed by Applicants to be patentable over de Bie for at least the same reasons.

Again, Applicants note that with regard to the rejection of claim 10 the Office Action has formed an interpretation of Fig. 2 of de Bie that the plurality of holes are connected to one another. Applicants believe that this is not so and believe that Fig. 2 shows quite clearly that the holes, as defined for example by side walls 26, 27 and by end faces 29,30, are formed distinct and separate from each other.

Claims 16-19 were rejected under 35 USC 103(a) over Eggers (US 6,437,509) in view of Makoto (JP 11-123577).

Claim 16 now includes the subject matter of a method for producing an electrode, in which the electrode has a pin-shaped head part having a longitudinal axis, wherein at least one hole is produced essentially transversely with respect to the longitudinal axis by short laser pulses of a maximum of $10 \mu\text{s}$ in duration and wherein the volume of the space provided by the at least one hole is between 0.02 mm^2 and 2 mm^2 . Applicants believe this is not disclosed either in Eggers, Makoto nor in the combination of Eggers and Makoto.

In particular, Applicants interpretation is that Eggers does not show a pin-shaped head part. Applicants believe that Eggers instead shows a coiled or helical shaped head

part and that this would not be interpreted by the person of ordinary skill as 'pin-shaped'. However, this notwithstanding, Applicants can find no disclosure in Eggers of the volume of the spaces within the holes, nor in Makoto. Therefore Applicants believe the subject matter of claim 16 cannot be produced from either Eggers or Makoto, either singly or in combination.

Therefore Applicants believe that claim 16 is patentable over the combination of Eggers and Makoto.

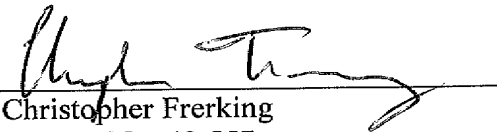
Claims 17-19 are dependent, either directly or indirectly, upon claim 16 and are therefore also believed by Applicants to be patentable over the combination of Eggers and Makoto for at least the same reasons.

III. Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and allowance of the pending claims.

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Respectfully Submitted,

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